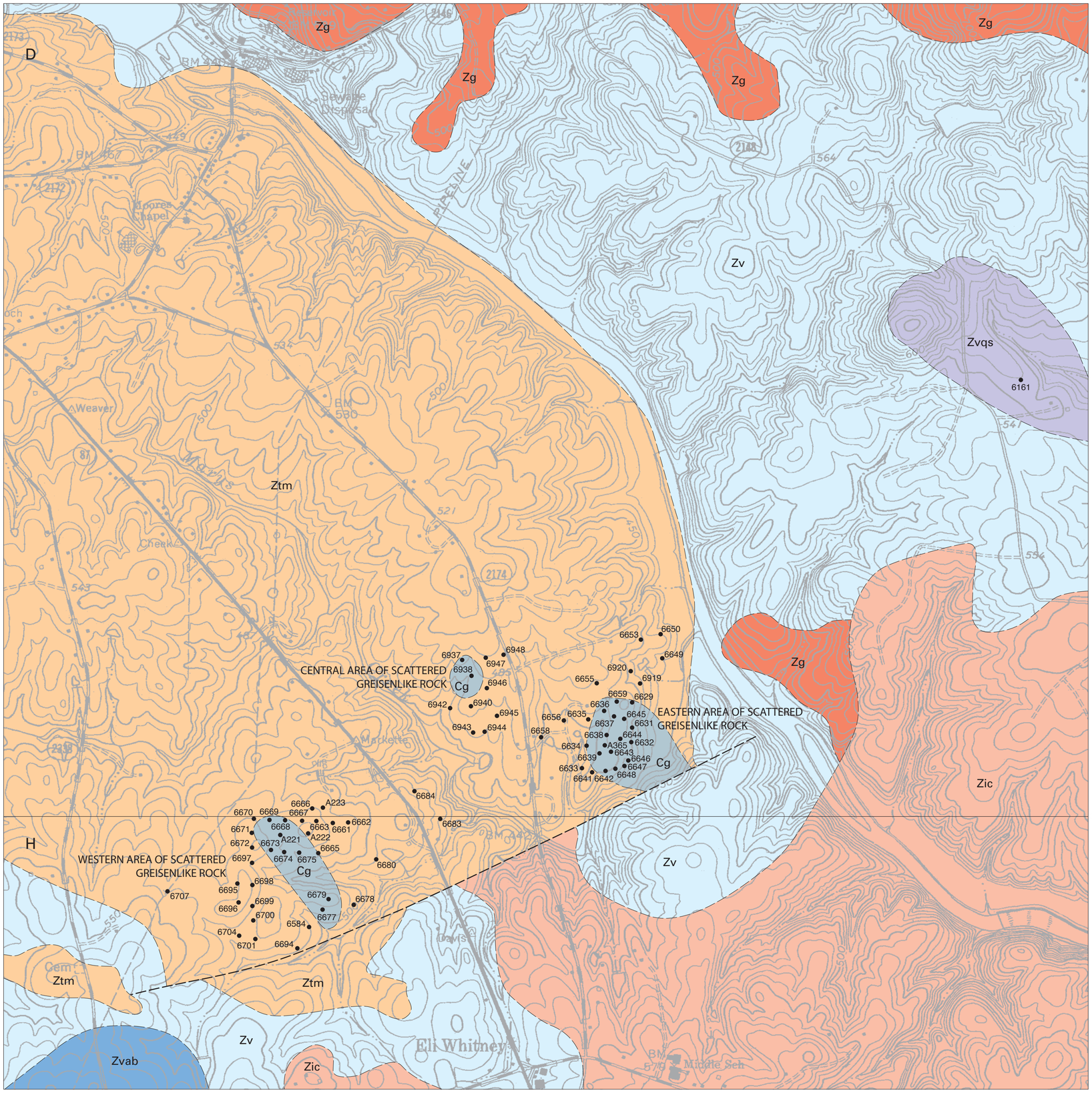
79°20'

79°17'30"

35°55'



SCALE 1:12 000

1/2 1/4 0 1/2 MILE

.5 .25 0 .5 KILOMETER

CONTOUR INTERVAL 10 FEET

EXPLANATION

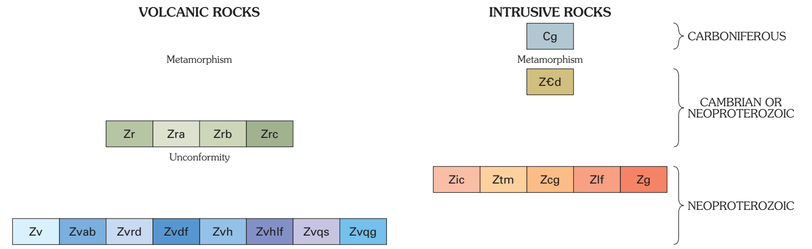
— — — **Contact**—Position inferred from scattered outcrops or soil types

– – – **Fault**—Position inferred from topographic features, juxtaposition of unrelated rock types, observed shear zones, lineaments noted on Landsat and side-looking radar images, and boundaries of mapped soils

6655 **Location of composite soil sample collected for analysis**—Analytical results given in table 11*B*

Figure 4B.—Geologic map showing the locations of composite soil samples collected from sector D and part of sector H and analyzed for molybdenum, copper, tin, and silver by emission spectroscopy.

CORRELATION OF MAP UNITS



DESCRIPTION OF MAP UNITS

VOLCANIC ROCKS

Intermediate to felsic volcanic complex (Neoproterozoic)—Mixed basaltic to rhyolitic tuff and coarse pyroclastic rocks, in part fragment rich; contains a few flows and volcaniclastic rocks. The entire assemblage is assumed to be older than the Reedy Branch Tuff. The regional correlation by Offield with the Aaron(?) Formation and the Hyco Formation of Harris (1982) is tentative

Zv — Tuffs, coarse pyroclastic rocks, and lesser flows and volcaniclastic rocks—Mixed lithic types and outcrop spacing precluded further subdivision in mapping. Where possible, individual rock types were mapped separately, but no internal stratigraphic sequence was recognized

Zvab — Andesitic or basaltic rocks—Few outcrops observed but a long narrow area of mafic rock is suggested by Tirzah- and Efland-type soils (Kaster, 1960)

Zvqs — Quartz-sericite-paragonite rock—Light-gray to grayish-green, altered intermediate to felsic volcanic complex. Original lithic textures generally remain recognizable. Commonly contains a trace to several percent pyrite. Also includes potassically altered rocks and epidote-rich altered rocks within and near plutons. Outer edges grade into volcanic rocks without hydrothermal alteration; inner contacts with siliceous core zone generally abrupt

INTRUSIVE ROCKS

Cg — **Unmetamorphosed granitoid rock (Carboniferous)**—Small areas of granite, dacite, and rhyodacite, quartz-rich and potassium-poor, light-colored and medium-grained, and molybdenum-bearing greisenlike muscovite quartz-epidote-sulfide rock. Some areas are strongly deuterically or hydrothermally altered. Rounded and partly embayed quartz phenocrysts are common; traces of potassium feldspar occur as replacements on microfractures. Propylitic alteration was incomplete and parts of the plagioclase phenocrysts retain their delicate oscillatory zones. Unmapped apophyses of unmetamorphosed granitoid rocks have intruded metamorphosed plutonic rocks in sectors C and D, and the northern halves of sectors G and H, such as at sites 6258, 6571, 6682, and 6707 (fig. 2, sectors D and H). The unmetamorphosed porphyritic hornblende quartz monzonite at site 6610H (fig. 2, sector J) was identified largely on the basis of float fragments ranging in size from cobbles to large boulders

Zic — **Quartz-diorite-hornfels-volcanic rock injection complexes (Neoproterozoic)**—Volcanic rock hornfels cut by multiple apophyses of fine-grained plutonic rock and variously textured porphyry; intrusive component may equal or exceed hornfels and volcanic rock. Excellent exposures of fine-grained quartz diorite in small bodies that have injected roof rock hornfels and masses, separated by hornfels screens, are present for 1.25 mi (2 km) along the banks of Cane Creek in sector H

Ztm — **Intrusive rocks, medium-grained, hypidiomorphic granular to porphyritic (Neoproterozoic)**—Generally silicified granite, rhyolite, dacite, rhyodacite, trachyte, quartz monzonite, quartz monzodiorite, quartz monzogabbro, granodiorite, and quartz diorite. In addition to primary quartz, plagioclase, and potassium feldspar, metamorphic minerals include epidote, biotite, muscovite, and chlorite; graphic and myrmekitic aggregates of quartz and feldspar are common in some bodies. A few small stocks underwent intense quartz-sericite and local potassic alteration; the latter is indicated by hydrothermal biotite. Hornblende developed locally during metamorphism at one site. Abundant wall-rock inclusions and variations in composition indicate that the rocks were modified by assimilation of andesitic material from the walls. Some mapped contacts were inferred from the extent of Appling, Cecil, and Helena soils (Kaster, 1960) with which these rocks correlate well

Zg — **Gabbroic stocks (Neoproterozoic)**—Small bodies of gabbro, quartz monzogabbro, hornblende quartz monzogabbro, diorite, and hornblende gneiss, having chilled margins and zones of assimilated wall rocks. Metamorphic hornblende, biotite, and newly formed potassium feldspar are common; metamorphism here was in amphibolite facies. Cuneiform quartz and myrmekite are present. Outcrop data were collected from areas near Foust Mine and other bodies close to the Snow Camp fault; and the further distribution of the rock was inferred from the presence of characteristic Davidson, Iredell, and Mecklenburg soils (Kaster, 1960)